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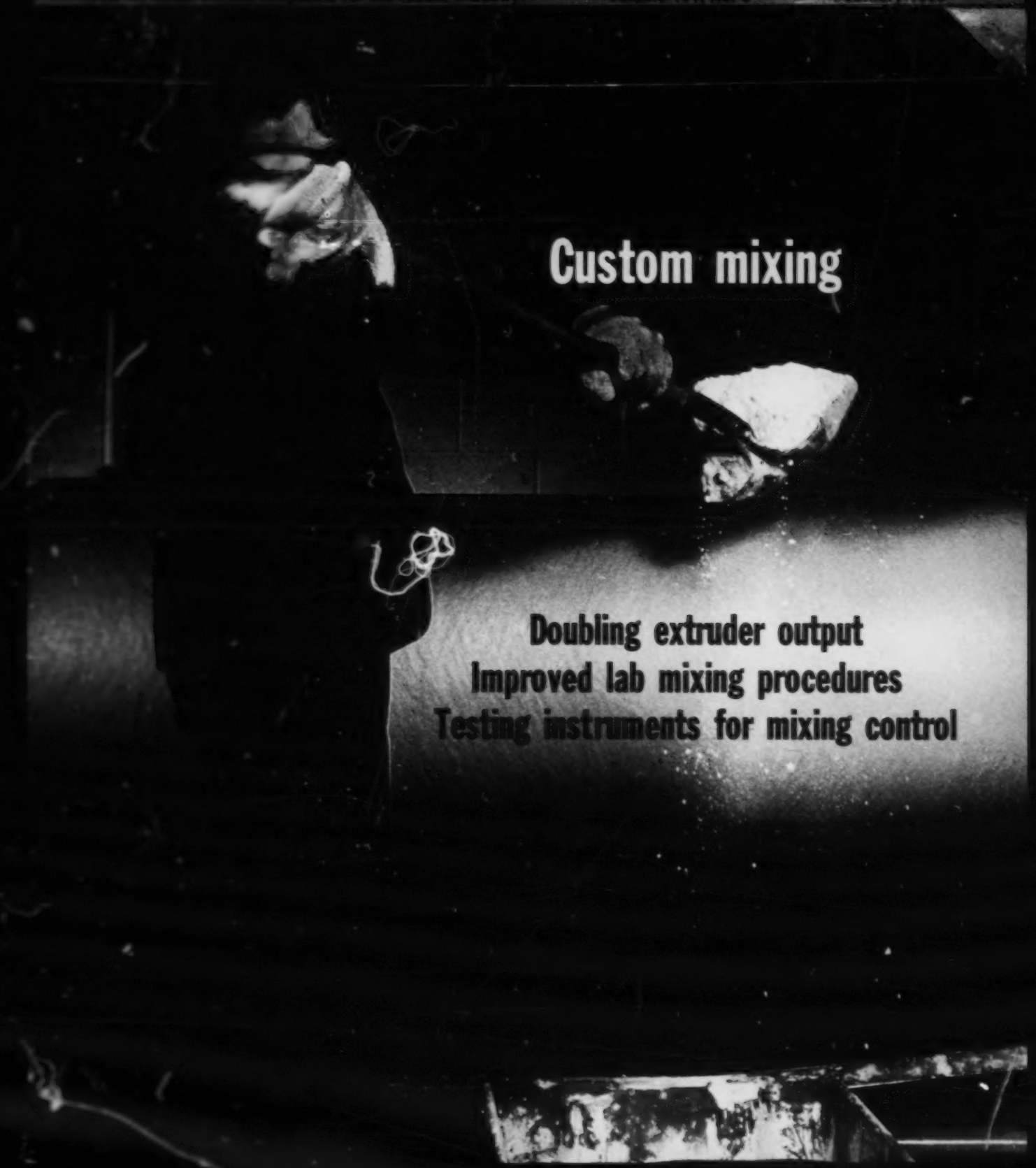
Rubber World

The technical service magazine for the rubber industry Volume 191, No. 5 February 1985



Custom mixing

Doubling extruder output
Improved lab mixing procedures
Testing instruments for mixing control

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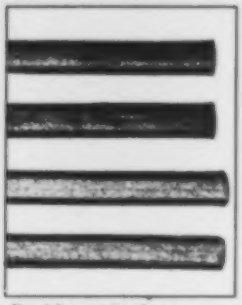

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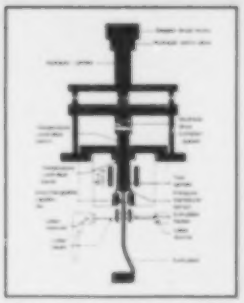

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by Jon Menough, contributing technical services editor. Even the simplest molding operation is complex. Author looks at what is actually happening in the process and what the material is intended to do.

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by Herbert L. Brantley, Jr., Firestone Tire. Author discusses how a mixing procedure based on the power profile gives a more uniform mix quality than one based on temperature.

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Cover

Cover photo courtesy of Central Rubber Co.

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Business Briefs

Acquisitions, expansions

Polysar has completed the first step in a three-part program to improve product quality and increase plant capacity at its ethylene-propylene rubber facility in Orange, TX. Additional modifications will be undertaken during the next two years which will boost capacity to 75 million pounds a year. Cost is estimated at $4-5 million.

Uniroyal sold its Malaysian natural rubber plantation company to **Kumpulan Guthrie, Sdn. Bhd.** for $71 million plus additional amounts to be paid within four years. The sale was caused by the Malaysian government's policy requiring Malaysians to have majority control of rubber plantation businesses. Uniroyal's Malaysian plantations produced approximately 32 million pounds of natural rubber annually.

Hoover-Hanes Rubber Corp., Tallapoosa, GA, completed its latest plant expansion which includes a 42,000 sq. ft. building increasing capacity by 70% for rubber mixing.

Astro Molding, Old Bridge, NJ is undergoing expansion of its rubber and silicone molding operation that will double production capacity upon completion.

SCM Corp. has initiated a $30 million modification program of the titanium dioxide manufacturing complex at Stallingborough, England that will increase overall capacity to 105,000 metric tons per year.

Imperial Chemical Industries Plc. agreed to purchase the chemical operations of **Beatrice Companies** for $750 million.

Seal Master Corp., Kent, OH purchased a 30,000 sq. ft. building adjacent to its present location that will double production capacity for its inflatable rubber seals.

Lancer Dispersions, Akron, OH doubled its manufacturing capacity for pigment color dispersions in thermoplastic resin systems by moving to a larger facility.

General Tire reopened its Brittain warehouse operation in Akron, OH which was closed in 1983 after General's Akron tire manufacturing plant shutdown. Initially only about one-third of the 664,000 sq. ft. of space will be utilized.

BFGoodrich has agreed to purchase the operating assets of **Sargent Industries'** PICO Division. PICO manufactures and services emergency evacuation systems for aircraft with manufacturing facility in Los Angeles and four service centers.

Alco Chemical, Chattanooga, TN expanded its spray

RMA industry rubber report through September 1984 (figures are expressed in metric tons)

	Cumulative 1984	Cumulative 1983	% Change 84 vs 83
Total New Rubber			
New rubber available	2,400,133	2,029,085	18.32
Imports	791,312	617,076	28.24
Exports	292,668	233,162	25.52
Apparent Consumption	2,059,834	1,824,009	13.46
Total Natural Rubber			
Imports	603,135	483,795	25.91
Exports	22,802	13,764	65.66
Apparent Consumption	582,750	481,750	21.00
% Total new rubber	28.16	26.41	
Total Synthetic Rubber			
Production	1,609,521	1,412,009	13.99
Imports	182,177	133,281	36.69
Exports	269,866	219,398	23.00
Apparent Consumption	1,486,908	1,342,259	10.78
% Total new rubber	71.83	73.58	
Total SBR			
Production	732,703	661,744	10.72
Imports	54,875	44,357	23.71
Exports	81,721	62,894	29.93
Apparent Consumption	686,507	659,939	4.03
Total Nitrile			
Production	49,336	39,599	24.59
Imports	8,686	6,960	24.7
Exports	5,896	4,747	24.20
Apparent Consumption	49,851	42,369	11.99
Polybutadiene			
Production	274,228	238,088	15.18
Imports	51,052	33,670	51.62
Exports	17,499	12,348	41.72
Apparent Consumption	307,654	258,205	20.09
Ethylene-Propylene			
Production	169,084	127,724	32.38
Imports	738	515	43.30
Exports	27,083	23,288	16.30
Apparent Consumption	130,611	104,769	24.66
Butyl, Polyisoprene, Silicone and other Synthetic Elastomers			
Production	285,277	262,128	8.83
Imports	63,186	43,298	45.94
Exports	107,010	84,753	26.26
Apparent Consumption	241,778	216,582	11.65
Polychloroprene			
Production	76,893	62,729	19.54
Imports	3,640	4,478	-18.71
Exports	30,657	31,368	-2.27
Consumption	70,307	62,426	12.62

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drying services and extended capacity for the custom manufacturing of solution and emulsion acrylic polymers, copolymers, carbon bisulfide and amine compounds.

Reeve Electronics, manufacturers of induction, dielectric and industrial microwave heating equipment has been acquired by **Mellish & Murray**, Chicago, IL.

Itaco, USA, a privately held California based company bought **McNeil Akron, Inc.** a manufacturer of tire, rubber and plastics equipment. Itaco's parent company, Itaco Holdings owns, Repiquet, a European manufacturer of equipment for the tire, rubber and plastics industries.

Contracts, licenses

Zwick GmbH, Ulm, West Germany has formed Zwick of America in East Windsor, CT to operate as the exclusive sales and service distributor for Zwick's materials testing machines and instruments.

Baychem Inc., Kennesaw, GA was appointed by **Glyco Inc.** as a distributor of its specialty chemicals in Georgia, Alabama and northern Florida. Glyco appointed **Worth Chemical Corp.**, Greensboro, NC as distributor in the Carolinas, Virginia and eastern Tennessee.

Financial statements

Blasius Industries reported second quarter net earnings of $918,000 on net sales of $11.4 million.

Cabot Corp. reported net sales for 1984 were $1.75 billion and operating profit was $213.3 million.

Price changes

Goodyear raised the price of its Plioflex styrene butadiene rubber by 2¢ per pound.

Union Carbide increased the prices of certain carbon fiber products produced from rayon and palyacrylonitrile based precursors. Grades T-300 6K, T-500 6K, T-300 12K, and T-500 12K prices increase 11.5% to 17% depending on the filament count.

Akzo Chemie America-Noury Chemicals reduced prices on the following organic peroxides. New prices for 2,000 lb. quantities are: 2-ethyl hexyl peroxydicarbonate- $3/lb.; sec-butyl peroxydicarbonate- $4.60/lb.; t-butyl peroxyneodecanoate- $3.62/lb.; cumyl peroxydeodecanoate- $4.61/lb.; t-butyl perpivalate-$3.10/lb. Also reduced are Cadox TX-50 silicone paste now at $12/lb. in over 500 lb. quantities and Trigonox 17/40 at $3.80/lb. in similar quantities.

Markets, news

Although the final figures for 1984 will not be available for several weeks, it appears that rubber consumption in North America grew substantially during the year compared to 1983 according to the International Institute of Synthetic Rubber Producers. IISRP figures show 1984

RMA tire & tube report through September 1984
(figures in thousands of units)

Passenger Tires	1984	1983	% Change
Shipments			
Original Equipment	28,160	31,590	+21.63
Radial	31,925	26,160	+21.90
Replacement	108,440	103,034	+6.22
Radial	83,059	71,185	+16.66
Export	4,462	2,939	+52.50
Radial	3,336	1,960	+67.64
Total	152,090	137,363	+10.73
Radial	118,320	99,305	+19.08
Production	130,563	117,057	+11.54
Radial	98,409	81,722	+20.49
Truck & Bus Tires			
Shipments			
Original Equipment	5,905	3,881	+52.15
Radial	3,047	1,771	+72.05
Replacement	23,528	22,141	+6.26
Radial	8,185	7,229	+13.22
Export	1,002	765	+30.98
Radial	462	366	+26.23
Total	30,435	26,787	+13.62
Radial	11,694	9,366	+24.86
Production	27,349	22,513	+21.46
Radial	10,422	6,903	+50.98

IISRP North American new rubber consumption forecast
(All figures in m metric tons)

	1983 (Actual)	1984	1985	1989
Styrene butadiene — dry	873	930	929	969
Styrene butadiene — latex	104	107	108	114
Polybutadiene	386	430	433	464
Ethylene/propylene	148	184	193	227
Nitrile — solid	53	63	65	71
Nitrile — latex	7	7	7	9
Polychloroprene	89	95	97	104
Other synthetic (1)	352	393	404	431
Total synthetic	2,012	2,209	2,236	2,389
Natural rubber	760	839	834	876
Total new rubber	2,772	3,048	3,070	3,265
% synthetic	72.6	72.5	72.8	73.2
Tire rubber	1,701	1,855	1,860	1,932
Non tire rubber	1,071	1,193	1,210	1,333
Carboxylated SBR latex	337	359	367	403

(1) Includes butyl and polyisoprene

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IISRP Western Europe new rubber consumption forecast
(All figures in m metric tons)

	1983 (Actual)	1984	1985	1989
Styrene butadiene — dry	594	603	615	649
Styrene butadiene — latex	109	109	110	112
Polybutadiene	222	232	237	260
Ethylene/propylene	133	140	146	165
Nitrile — solid & latex	73	77	78	80
Polychloroprene	81	80	79	77
Other synthetic (1)	192	200	208	237
Total synthetic	1,404	1,441	1,473	1,580
Natural rubber	826	840	850	890
Total new rubber	2,230	2,281	2,323	2,470
% synthetic	63.0	63.2	63.4	64.0
Carboxylated SBR latex	255	273	275	290

(1) Includes butyl and polyisoprene

consumption increased by an estimated 10%, but this level is still lower than 1979, the year of record rubber consumption. IISRP projections of rubber demand through 1989 show a compounded annual growth rate of 1.4%. Because of the development of longer wearing and smaller tires, the proportion of total rubber used in tires is projected to decline from 60.9% in 1984 to 59.2% in 1989. Synthetic rubber is expected to increase from 72.5% to 73.2% of total rubber consumer during the same time frame. The strongest growth segment is expected to be in ethylene-propylene rubbers. A major portion of this strength is expected in non-tire applications (4.3% per year).

The IISRP said synthetic rubber consumption increased 3.2% in western Europe in 1984 despite the reduction in automotive production in West Germany, France and the U.K. The long term forecast projects a growth rate of 1.8%. The general purpose rubber are expected to grow at levels below the estimates for industrial production due to the continued downsizing trend in car tires. However, some SBR substitution by polybutadiene rubber in tires is forecast providing a growth rate equal to assumed car production growth rates for polybutadiene. EPDM is forecast to grow at the rate of 3.3% throughout the forecast period. Growth in specialty elastomers is estimated to be approximately 6% per annum.

Goodyear and Firestone have both released their projections for tire sales in 1985. Goodyear says demand will be 50 million original equipment tires, 138 million replacements, 2.2 million oe truck tires and 5.6 million truck replacement radials. Goodyear said imports took 21% of the total replacement tire market and 26% of the radial market. The company said the U.S. tire industry operated at well over 90% capacity in 1984.

Firestone sees 51 million oe tires sold, 138 million replacements, and total truck tire sales of 39 million units with oe accounting for 7 million units. Tractor and farm implement shipments should be around 3.5 million units.

Goodyear says that 1985 should see a record year in U.S. retail sales of replacement belts and hoses. The industry should reach $1.03 billion in retail sales. V belts and hose will lead the way in the auto aftermarket with forecasted increase of over 6% over 1984's performance.

BFGoodrich will phase out the manufacturing of industrial rubber products in Akron by the end of the first quarter of 1986 affecting 950 hourly and salaried people.

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Custom mixers anticipating growth

With two years of capacity expansion programs behind them, most custom mixers are looking forward to utilizing this added capacity in 1985. A recent *Rubber World* survey shows that capacity expansion among the custom mixers slowed in 1984 compared to 1983 and that most mixers weren't planning expansions for this year. "We have put in place enough capacity to last us for quite a while" one mixer said and the survey results bear this out.

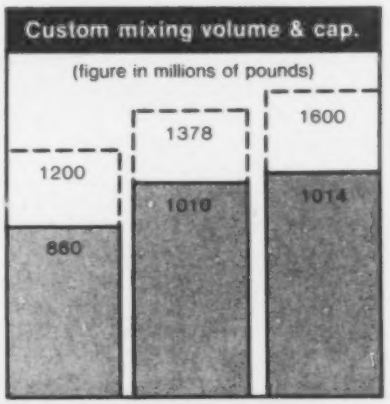
The survey shows the custom mixing segment of the rubber industry operated at 60% capacity in 1984 a drop from the 70% reported last year and lower than the 62.4% reported in 1982. The drop is a result in the addition of capacity because actual pounds mixed increased slightly from just over one billion pounds in 1983 to an estimated 1.014 in 1984. The estimated volume for 1982 was 860 million pounds.

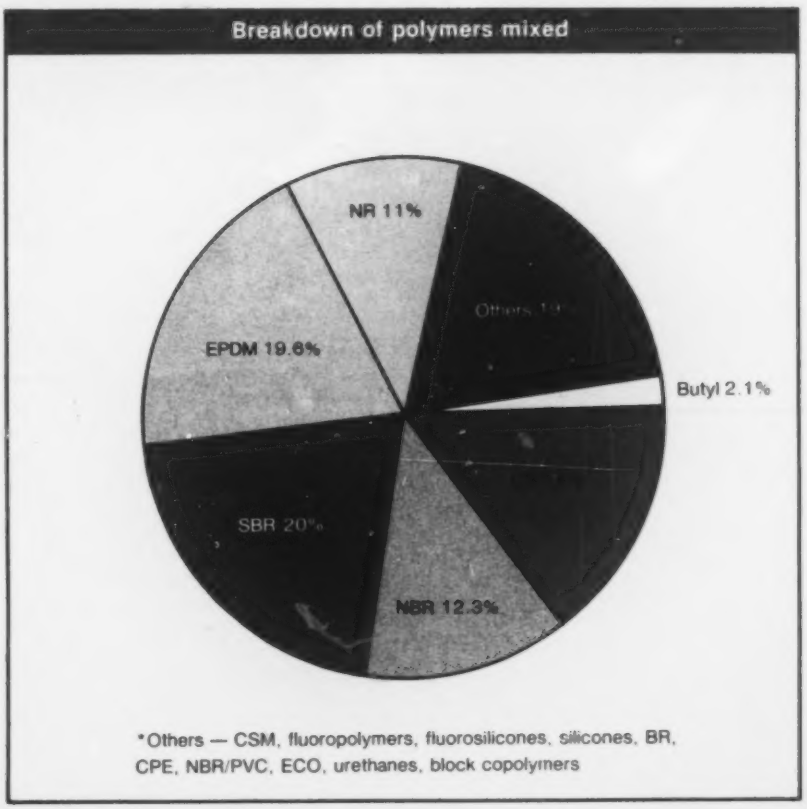
Expansion has been put on hold for 1985 as only 16% of the mixers indicated they would add to capacity this year while 41% indicated last year they were planning expansions. Some actually didn't go through with expansion programs as only 25% of the companies expanded in 1984. While companies didn't increase mixing capacity, many added to the services they provide. Calendering is now offered by 55% of the custom mixers whereas only one third reported that service a year ago. Some mixers have added custom extrusions to their business as well.

Some of the expansions that did take place in 1984 were Long Mile's expansion of facilities adjacent to its Dallas, TX operation, J-Sil added 12,000 sq. ft. to its Brimfield, IN facility and Ristance Compounds tripled its mixing capacity for silicones at Mishawaka, IN. Also in 1984, Quabaug Rubber entered the custom mixing business by establishing a separate operating unit with the capability to mix most polymers.

Most of the mixers offer the capability to mix most polymers with some specializing only in specialty elastomers like thermoplastics and fluoroelastomers. Some do strictly silicone mixing. (See accompanying directory for individual company capabilities.)

Styrene butadiene rubber was indicated as the rubber mixed the most often, capturing almost 20% of the market. SBR was followed by ethylene propylene rubbers at 19.6%, chloroprenes at 16%, NBR at 12.3% and natural rubber close to 11%. The survey shows actually a slight drop in EPDM mixing with almost 200 million pounds mixed in 1984 compared to 224 million in 1983. SBR increased from 193 million in 1983 to 202.4 million in 1984 and CR slid from 191 million to 163 million. A big gain was recorded in the so-called other category from 160 million to 192 million. This category consists of fluoroelastomers, silicones, CSM, fluoropolymers, BR, CPE, NBR/PVC, ECO urethanes and block copolymers.





Custom mixers

The following directory lists the custom mixers along with plant locations, equipment, mixing capabilities and capacity. A map showing locations appears on pages 18 and 19.

Adcoat Inc.
172 E. La Jolla St.
Placentia, CA 92670
(714) 630-7311
Hugh Muller
President
Sheldon Weinstein
Vice President
James Troska
Research and Development
Equipment: 5 high speed dispersion mixers, 10 low speed mixers
Mixing capabilities: all solvent soluble resins and polymers
Capacity: 2 million gals./year

Alloy Polymers, an Inco Co.
145 Hopper Ave.
Waldwick, NJ 07463
(201) 447-6172
Branch
Alloy Polymers
3155 W. Big Beaver Road
(Suite 205)
Troy, MI 48084
(313) 626-5162
S. Pahuja
Gen. Mgr.
Equipment: 2 lines-Werner & Pfleiderer Twin Screw High Intensity Mixers
Mixing capabilities: Specialize in engineering polymers
Capacity: 10 million lbs/year

Associated Rubber Co.
Spring St.
P.O. Box 245
Tallapoosa, GA 30176
(404) 574-2321
Glenn Stephens
General Manager
Equipment: 3 #11 Banburies
Mixing capabilities: SBR, NR, NBR, CR, ECO, CSM, EPDM, IIR, CIIR, Fluoroelastomers
Capacity: 90 million lbs/year

Avon Custom Mixing Services
Division Chase & Sons Inc.
55 High St.
Holbrook, MA 02343
(617) 767-0511
Anthony Chiulli
Operations Manager
Mark F. Chase
Factory Manager
Frank B. Smith
Sales Manager
Equipment: 2 #11 Banburies, #3 Banbury, 8 mills (84", 60", 48"), 6 calenders
Mixing capabilities: all elastomers including silicone
Capacity: 10 million lbs/year

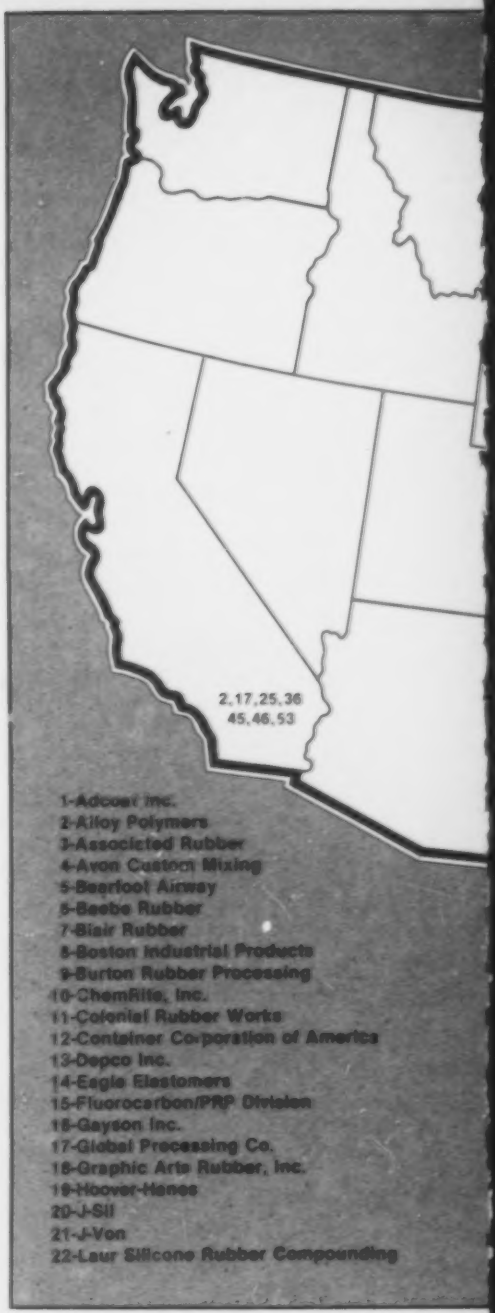
Bearfoot Airway Division
Bearfoot Corp.
First & Water Sts.
Wadsworth, OH 44281
(216) 335-2581
W.O. Stoufer
General Sales Mfg.
District Sales Office
Bob Kross
404 Northland Towers W.
15565 Northland Dr.
Southland, MI 48075
Equipment: 3 #11 Banburies (1 pelletizer), 3 calenders, 4-84" mills, 3-60" mills, 2 tubers, Cameron 56" slitter
Mixing capabilities: SBR, NBR, CR, BR, IIR, NR, Non-black, Adhesives, specialize in butyl mixing
Capacity: 20 to 25 million lbs/year

Beebe Rubber Co.
20 Marshall St.
Nashua, NJ 03061
(603) 883-5576
Equipment: #3A Banbury, 2 #11 Banburies, 5 mills (60 to 84")
Mixing capabilities: NR, CR, IIR, SBR, NBR, CSM, Polysulfide, all others except silicone
Capacity: 90 million lbs/year

Blair Rubber Company
1252 Mina Ave.
Akron, OH 44321
(216) 666-3600
Tom Blair
President
A.W. Giles
Sales Custom Mixing
Equipment: internal mixer and open mill
Mixing capabilities: natural, nitrile, EPDM, Neoprene, chlorobutyl, butyl, hypalon, SBR
Capacity: Not available

Boston Industrial Products
Div. Dana Corp.
Hwy. 77 East
P.O. Box 38
Newbern, TN 38059
(901) 627-2531
Dale Meyring
Customer Service Manager
Equipment: F270 Banbury
Mixing capabilities: NR, EPDM, SBR, NBR, CR, CSM, ECO, BR
Capacity: 30 million lbs/year

Burton Rubber Processing Inc.
14330 Kinsman Rd.
Burton, OH 44021
(216) 834-4644
David W. Mohr
VP Sales
Branch
P.O. Box 377
Highway 34
Jonesboro, TN 37659
Equipment: 2 #11D Banburies, F270 Banbury, F370 Banbury, 4-60" mills
Mixing capabilities: all synthetic and natural rubber excluding latex, silicones and fluoroelastomers, alloys of plastics/rubber and color concentrates, PVC/NBR blends
Capacity: 50 to 80 million lbs/year



ChemRite, Inc.
P.O. Box 1052
149 King St.
W. Hanover, MA 02339
(617) 878-5300
Dick Mastromatteo
Owner
Ernest Morrisey
General Manager

Equipment: 2 #3A Banburies, 3-60" mills, 84" mills, 8½" extruder/strainer, 3 refiners

Mixing capabilities: fluoropolymers and fluorosilicones
Capacity: 2 million lbs/year

Colonial Rubber Works
150 South Connell Ave.
Dyersburg, TN 38024
(901) 285-4353
Jim Carver
VP Sales
Branch
P.O. Box 640
Kingstree, SC 29556
Equipment: 2 #27 Banburies, 3 #12 Stewart Bolling, 6 #10 Stewart Bolling, 4 calenders (3-60", 1-66")
Mixing capabilities: thermoset and thermoplastic
Capacity: 300 million lbs/year

Container Corporation of America
Heisler Compounding Division
P.O. Box 1648
1204 E. 12th Street
Wilmington, DE 19898
(302) 573-2550
Doug Brown
Gen. Mgr.
Equipment: 2 #4 Stewart Bolling, #10 Stewart Bolling, 6" cold feed extruder with each mixer
Mixing capabilities: Plastic resins, IIR, EPDM, EPR, NBR, SBR, general polyolefins, non-black
Capacity: 70 million lbs/year

Depco Inc.
36 Grand Blvd.
Brentwood, NY 11717
(516) 231-1610
David Bean
President
Equipment: 2 mills (40" and 45")
Mixing capabilities: exclusively silicone
Capacity: One million lbs/year

Eagle Elastomers
4646 Darrow Rd.
Stow, OH 44224
(216) 688-7070
Neil McHale

Director of Sales
Equipment: 36" special mill, 60" calender, 2½" extruder
Mixing capabilities: fluoroelastomers and fluorosilicones
Capacity: 1.25 million lbs/year

Fluorocarbon/PRP Division
10420 Old Katy Road
P.O. Box 3402
Houston, TX 77253
(713) 467-9111
Charles E. White
Chief Chemist
Equipment: Banbury (internal) and open mill
Mixing capabilities: all kinds
Capacity: 15,000 lbs/day

Gayson Inc.
P.O. Box 222
Ringwood, NJ 07456
(201) 728-8100
L. Raymond Olson
President
Equipment: Banbury, 2 2-roll mills, 3 3-roll mills
Mixing capabilities: silicone, specialty colors
Capacity: not available

Global Processing Co.
11831 Wakeman St.
Santa Fe Springs, CA 90670
(213) 945-1241
Fred Williams
President
Equipment: #4 Banbury, 2 mills (60" & 50")
Mixing capabilities: All types except silicone, specialize in fluoroelastomers
Capacity: 5 million lbs/year

Graphic Arts Rubber, Inc.
467 Dan Street
Akron, OH 44310
(216) 253-0731
Jim Bedell
Sales Manager
Equipment: 3-60" mills
Mixing capabilities: all-no free black
Capacity: Two million lbs/year

Hoover-Hanes
Pequanoc Dr.
Tallapoosa, GA 30176
(404) 574-2341
Jack Williams
VP & Gen. Mgr.
Equipment: #11 Banbury, #9 Banbury, 84" mill, 100" mill
Mixing capabilities: all grades of soft and hard rubber
Capacity: 50 million lbs/year

J-Sil
1400 North Bowie Drive
Weatherford, TX 76086
(817) 594-0263
Gary Mellema
Marketing Manager
Branch
J-Sil East
169A Progress Dr.
Manchester, CT 06040
(203) 761-5509
J-Sil Midwest
U.S. 6 West, P.O. Box 845
Kendallville, IN 46755
(219) 347-5813
Equipment: 8 Domixers varying from 180 gallon to 600 gallon; 2 Banbury mixers (3A & 11); 12 mills (40", 60", 84")
Mixing capabilities: silicone and fluorosilicone
Capacity: 20 million lbs/year

J-Von
Division of Jones & Vining
25 Litchfield St.
Leominister, MA 01453
(617) 537-4721
Victor E. Nunan
VP & Gen. Mgr.
Equipment: 2½" single screw extruder, 4½" single screw extruder, 67mm twin screw extruder, 110mm twin screw extruder
Mixing capabilities: styrenic block copolymers, thermoplastic elastomers
Capacity: 12 million lbs/year

Laur Silicone Rubber Compounding, Inc.
4930 S. M-18
P.O. Box 509
Beaverton, MI 48612
(517) 435-7706
Don Laur — VP
Equipment: 24" mill, 60" mill, 10 gal & 150 gal double arm mixers, preforming strainers
Mixing capabilities: exclusively silicone
Capacity: One million lbs/year

Long Mile Rubber — Flexmix Div.
5550 LBJ Freeway
Suite 200
Dallas, TX 75240
(214) 350-7851
Jerry Strigle
Director Custom Mixing
Equipment: #4 Banbury + 6" extruder, #9 Banbury, 2 #11 Banburies, 2-260A Skinners, 60" mill, 3-8" hot-feed extruders, 2-10"extruders
Capacity: Not available

Mach-1 Compounding
Division of Burton Rubber Processing Inc.
775 E. Highland Rd.
Macedonia, OH 44056
(216) 467-8109
Edward M. Echan
General Manager
Equipment: #3D Banbury, Henschel, ribbon blender, FCM
Mixing capabilities: thermoplastic, thermoset, thermoplastic elastomer, alloys
Capacity: 12 million lbs/year

Master Processing Corp.
2500 Thompson St.
P.O. Box 740
Long Beach, CA 90801
(213) 531-3880
L.G. Parasson
Sales & Marketing
Branch
Muscatine, IA
(319) 262-2505
Equipment: #11 Banbury, 3 #12 Stewart Bolling, #10 Stewart Bolling, 3-66" calendars, 60" calender, 7 mills (60", 66", 84")
Mixing capabilities: all of the solids
Capacity: 125 million lbs/year

Midwest Rubber Reclaiming Co.
745 Norton Ave.
P.O. Box 270
Barberton, OH 44203
(216) 753-5056
Harold Jessop
General Manager
Equipment: #11 Banbury, Shaw K-7, #12 Stewart Bolling
Mixing capabilities: standard types
Capacity: 60 million lbs/year

H. Muehlstein & Co., Inc.
3296 W. Market St.
P.O. Box 5402
Akron, OH 44313
(216) 836-9131
H.L. Gaynor
VP
Equipment: #27 Banbury
Mixing capabilities: complete master-batch mixing services
Capacity: 12 million lbs/year

Paeco Rubber Co.
225 W. Lake St.
P.O. Box 472
(216) 673-4100
W.H. Phillips
Treasurer
Equipment: #10 Stewart Bolling
Mixing capabilities: all except Viton or silicone
Capacity: 20 million lbs/year

Passaic Rubber Co.
45 Demerest Dr.
P.O. Box 505
Wayne, NJ 07450
(201) 696-9500
John Mathey
Equipment: #4 Stewart Bolling, 5 mills (60" to 84"), 2-54" calenders, 4" extruder
Mixing capabilities: all polymers except Thiokol
Capacity: 3 million lbs/year

Pelmor Laboratories Inc.
401 Lafayette St.
P.O. Box 309
Newtown, PA 18940
(215) 968-3334
Bruce G. Pelham
VP Sales
Equipment: #1B Banbury, 3 mills (18", 40", 60")
Mixing capabilities: generally all types, specializing in Viton
Capacity: 750,000 lbs/year

Pilgrim Custom Mixing Corp.
84 Water St.
P.O. Box 2573
Fall River, MA 02722
(617) 675-0181
Arthur P. Reis
Gen. Mgr.
Equipment: 3 #11 Banburies, 2-60" mills, 3-84" mills
Mixing capabilities: all general purpose polymers
Capacity: 13 million lbs/year

Polymerics, Inc.
2828 Second St.
Cuyahoga Falls, OH 44221
(216) 928-2210
Dave Topliff
General Mgr.
Equipment: #9 Banbury, 60" mill, 84" mill
Capacity: 12 million lbs/year

Polysar Rubber Services
Division of Polysar Inc.
2603 W. Market St.
Akron, OH 44313
(216) 836-0451
T.C. Green
Corporate Offices General Manager
R.W. Houkom
Marketing Manager
Regional Plant Locations:
Joe Falanga
Mfg. Mgr.
1020 Lambert St.
Barberton, OH 44203
(216) 745-1184
Colonial Oaks Ind. Park
P.O. Box 327
East Brunswick, NJ 08816
(201) 257-9600
Charles McKeag
Site Manager
1038 Evans Ave.
Akron, OH 44305
(216) 630-9460
Equipment: 2 #4 Banburies, 2 #11 Banburies, #12 Banbury, 2 F270 Banburies
Mixing capabilities: most organic rubbers and thermoplastics, silicone, separate black and non-black facilities
Capacity: approx. 100 million lbs/year

Prolastomer Inc.
56 Eagle Street
P.O. Box 2068
Waterbury, CT 06708
(203) 755-5755
Dennis J. Synnott
Technical Director
Equipment: Banbury, Mill, Extrusion, Underwater pelletizer
Mixing capabilities: thermoplastic elastomers
Capacity: Not available

Quabaug Custom Mixing
North Brookfield, MA 01535
(800) 325-5022,
in MA (617) 867-7731
Kevin Donahue
Equipment: 2 #11 Banburies; 1 #9 Banbury; 2 lab banburies
Mixing capabilities: SBR, neoprene, nitrile, butyl, EPDM, Hydrins
Capacity: 50 million lbs/year

R&S Processing Co., Inc.
15712 Illinois Ave.
P.O. Box 985
Paramount, CA 90723
(213) 531-1403
James Inga
President
Equipment: #9 Banbury (black), #4 Stewart Bolling (colors)
Mixing capabilities: NR, IR, SBR, IIR, EPDM, ECO, CR, Urethane, Polysulfide, Viton, NBR
Capacity: 18 million lbs/year

Rainbow Mastermixing Inc.
455 Dan St.
Akron, OH 44310
(216) 374-1810
Daniel R. Unk
President
Equipment: 60" rubber mills, granulators
Mixing capabilities: All. Specializing in colors and fluoroelastomers
Capacity: 1.7 million lbs

Rauh Rubber Inc.
986 E. Market St.
Akron, OH 44305
(216) 253-2549
(216) 253-5667
Joe Rauh
President
Equipment: #11 Banbury, 60" mill, 84" mill, Barwell extruder/preformer
Mixing capabilities: NR, SBR, EPDM, NBR, CR, EPR, IIR, ECO
Capacity: 20 million lbs/year

Ristance Compounds
14155 Esther Ave.
Mishawaka, IN 46545
(219) 259-9903
Equipment: mills
Mixing capabilities: silicone
Capacity: NA

Rubber Mixing Industries
1205 E. Bowman St.
Wooster, OH 44691
(216) 264-4091
E. David Gordon
Equipment: #3A Banbury, #11 Banbury, 68" 3-roll calender, 66" 3-roll calender, 66" 4-roll offset calender
Mixing capabilities: NBR, SBR, EPDM, CSM, CR, IIR, custom calendering
Capacity: 35-40 million lbs/year

S&D Rubber Co.
King Street
W. Hanover, MA 02339
(617) 878-2626
John P. Davis
Equipment: #3A Banbury, 3 #9 Banburies, 2 extruders (4" & 8"), 2 mills (60" & 84")
Mixing capabilities: all polymers
Capacity: 15 million lbs/year

Star-Glo Industries
2 Carlton Ave.
East Rutherford, NJ 07073
(201) 939-6162
Martin F. Sheridan
General Manager
Equipment: 2 #3A Banburies, 2-66" calenders
Mixing capabilities: NR, SBR, CIS-BR, NBR, CR, IIR, EPDM, CSM, ACM, Urethane, Norsorex, Fluoroelastomers, silicone
Capacity: 3 million lbs/year

Technical Rubber & Plastics Corp.
180 Getty Ave.
Clifton, NJ 07015
(201) 546-0700
Marc Witt
Vice President
Equipment: #3A Banbury
Mixing capabilities: SBR, NR, EPDM, CSM, CR, Viton, Silicone, Urethane, Polysulfide
Capacity: 20 million lbs/year

Uniroyal, Inc.
Custom Mixing Unit
312 North Hill Street
P.O. Box 2000
Mishawaka, IN 46544-1399
(219) 256-8528
A.L. Javis
Sales Manager
Equipment: Banbury, open mill and internal mixer
Mixing capabilities: all natural and synthetic
Capacity: 200 million lbs/year

Valley Processing
491 Wilson Way
Industry, CA 91744
(818) 961-0311
Bill Bryant
VP Sales
Equipment: #3A Banbury, 2 #11 Banburies, 68″ 4-roll calender
Mixing capabilities: SBR, CR, NBR, EPDM, IIR, NR, CSM, BR
Capacity: 50 million lbs/year

West American Rubber Co.
750 North Main St.
Orange, CA 92668
(714) 532-3355
Arun Shah
Vice President R&D
Equipment: #3A & #11 Banburies
Mixing capabilities: all solid polymers
Capacity: 24 million lbs/year

Custom Services

The following companies offer various custom services to the rubber industry. Locations, equipment and services offered are given. A map showing locations appears on pages 18 and 19.

Akron Dispersions, Inc.
3291 Sawmill Road
P.O. Box 4295
Akron, Ohio 44321
(216) 666-0045
Michael J. Giustino
General Manager
Jeanne Volk
Customer Service
Services offered: chemical grinding and blending, rubber grinding, DLCs, liquid blending

Baker Rubber, Inc.
P.O. Box 2438
South Bend, IN 46680
(219) 291-5101
R. Douglas Toler
Director of Marketing
Services offered: grinding of tires and other rubber products
Equipment: grinders and choppers; vibrating screens

Calendering Specialists, Inc.
1119 Commercial Blvd., South
Arlington, TX 76017
(817) 467-1200
Don Ripley
Vice President/Production Manager
Services offered: custom calendering
Equipment: calender, 66″ mills, slitters, dip tanks

Central Rubber Co.
844 E. Jackson St.
Belvidere, IL 61008
(815) 544-2191
Contact: Frank Bruno
(312) 272-7990
Services offered: custom molding of colored rubber
Equipment: mills
Mixing capabilities: NR, SBR, Neoprene, Hypalon nitrile EPDM silicone, butyl, urethane, Viton Thiokol

The Crislip Corporation
121 Factory Street
P.O. Box 4441
Creston, OH 44217
(216) 435-6881
D.E. Crislip Jr.
Vice President
Services offered: tank lining and tank lining applicator rubber
Equipment: mills, calenders, autoclaves, pressers, air compressors, steam tables, lathes

North American Reiss Corp.
Homestead Road
Belle Mead, NJ 08502
(201) 359-5100
Dennis Azzolina
General Manager
Services offered: silicone rubber compounds
Equipment: rubber mills and extruders for straining and preforming

Rubber/Urethanes, Inc.
968 W. Foothill Blvd.
Azusa, CA 91702
(818) 334-0281
Jerry Goens
Bernadette Battles
Services offered: precision metal to rubber bonded components and capstans for the computer and electronic industries
Equipment: autoclaves, coaters, cooling equipment, curling ovens, deflashing equipment, extruders, grinders, lathes, mills, mixers, plastic processing equipment, presses (compression, transfer, injection), punch presses, ribbon blenders, trimmers, urethane processing equipment (cast and spray)

Salem-Republic Rubber Company
P.O. Box 389
475 W. California Ave.
Sebring, OH 44672
1-800-221-5389
In Ohio, (216) 938-9301
A.V. Ney
President, Gen. Mgr.
Jim Willis
Customer Service Mgr.
Equipment: processing machinery and equipment, mills, extruders, calenders, cutting equipment, dryers, hose-making machinery, lathes, vulcanizers, autoclaves
Mixing capabilities: hand and machine-made hose, custom calendered uncured materials
Capacity: hose 1.5 million lbs/yr; custom calendered goods 500,000 lbs/yr

Sparton Enterprises, Inc.
3717 Clark Mill Road
Barberton, Ohio 44203
(216) 745-6088
Jim Little Jr.
VP/Sales
Equipment: grinders, granulators, sifters and sizing equipment
Mixing capabilities: Rubber grinding, granulating, recycling
Capacity: 30 million lbs/yr

Tooltec Inc.
2225 Meyer Road
Fort Wayne, IN 46803
(219) 426-4686
Karl Reuther II
President
Services offered: manufacturing of trimless rubber mold
Equipment: 2 CNC lathes, 1 CNC vertical machining center, 7 engine lathes, 4 Bridgeport mills, 2 radial drills, grinders